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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,199	12/14/2001	Adnan Kavak	SAMS01-00163	2594

7590 02/07/2006  
Docket Clerk  
P.O. Drawer 800889  
Dallas, TX 75380

EXAMINER

PHUONG, DAI

ART UNIT PAPER NUMBER

2688

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/023,199	KAVAK ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Dai A. Phuong	2688	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 11 is/are rejected.
- 7) ☒ Claim(s) 2-10 and 12-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

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**DETAILED ACTION**

***Response to Amendment***

1. Applicant's arguments, filed 01/18/2006, with respect to claims have been considered but are moot in view of the new ground(s) of rejection. Claims 1-20 are currently pending.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Gesbert et al. (U.S. 6377819).

Regarding claim 1, Gesbert et al. disclose for use in wireless network communications system comprising a base transceiver station 10 having an adaptive antenna array 12A and 12B (fig. 2, col. 4, line 66 to col. 5, line 9) and a mobile station T1 having a first mobile antenna 18A and a second mobile antenna 18B (fig. 2, col. 4, line 66 to col. 5, line 9), an apparatus for improving downlink performance of said adaptive antenna array of said base transceiver station, said apparatus comprising: a spatial signature estimator 100 associated with said base transceiver station, said spatial signature estimator operable to obtain a spatial signature from a signal received by said base transceiver station from said first mobile antenna and further operable to obtain a spatial signature from a signal received by said base transceiver station from said second mobile antenna (fig. 6, col. 12, lines 24 to col. 13, line 29); and correlation circuitry coupled to said spatial signature estimator, said correlation circuitry operable to use a spatial signatures

obtained from said first mobile antenna and from said second mobile antenna to identify a least changing spatial signature, and capable of using said least changing spatial signature to obtain a downlink beamforming weight vector (fig. 6, col. 12, lines 24 to col. 13, line 29).

Regarding claim 11, this claim is rejected for the same reason as set forth in claim 1.

***Reasons Subject Matter***

4. Claims 2-10 and 12-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 3-10 and 13-20 are dependent on claims 2 and 12 respectively.

Regarding claims 2 and 12, the prior art record does not disclose nor fairly suggest **wherein said spatial signature estimator is operable to obtain a first set of spatial signatures comprising a first spatial signature from said first mobile antenna and a first spatial signature from said second mobile antenna during a first portion of an uplink interval of a time division duplex slot associated with said first mobile antenna and said second mobile antenna; and wherein said spatial signature estimator is operable to obtain a second set of spatial signatures comprising a second spatial signature from said first mobile antenna and a second spatial signature from said second mobile antenna during a second portion of said uplink interval; and wherein said correlation circuitry is operable to measure changes in said second set of spatial signatures with respect to said first set of spatial signatures to identify said least changing spatial signature.**

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### Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dai A Phuong whose telephone number is 571-272-7896. The examiner can normally be reached on Monday to Friday, 9:00 A.M. to 5:00 P.M..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eng George can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dai Phuong

AU: 2688

Date: 02-02-2006

  
GEORGE ENG  
SUPERVISORY PATENT EXAMINER